

Mr. Paul A. Luther
Purina Mills, LLC.
P. O. Box 66812
St. Louis, MO 63166

Re: 085-15278
First Minor Permit Revision to
MSOP 085-14327-00021

Dear Mr. Luther:

Purina Mills, LLC. was issued a minor source operating permit (MSOP) on September 14, 2001, for operating an animal feed manufacturing operation. An application for certain changes to the MSOP was received on January 30, 2002. The changes related to the installation of two (2) new feed packers, and the increase in the maximum packing rate from 12 tons per hour to 30 tons per hour. Pursuant to the provisions of 326 IAC 2-6.1-6 a minor permit revision to this permit is hereby approved as described in the attached Technical Support Document.

Pursuant to 326 IAC 2-6.1-6, the minor source operating permit shall be revised by incorporating the minor permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this permit revision which includes this letter, the attached Technical Support Document, and revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Madhurima Moulik, at OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Madhurima Moulik or extension 3-0868, or dial 317-233-0868.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

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cc: File - Kosciusko County
Kosciusko County Health Department
Northern Regional Office
Air Compliance Section Inspector - Doyle Houser
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

CONSTRUCTION AND MINOR SOURCE OPERATING PERMIT OFFICE OF AIR QUALITY

**Purina Mills, Inc.
346 West 1350 N, Milford, IN 46542**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 085-14327-00021	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: 9-14-2001

First Minor Permit Revision: 085-15278	Pages Modified: 4, 15, 16, 17
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date:

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary animal feed manufacturing operation.

Authorized Individual: Paul Luther
Source Address: 346 West 1350 N, Milford, IN 46542
Mailing Address: P.O. Box 66812, St. Louis, MO 63166-6812
Phone Number: 314-768-4630
SIC Code: 2048
County Location: Kosciusko
County Status: Attainment for all criteria pollutants
Source Status: Minor Source Operating Permit;
Minor Source, under PSD Rules;
Minor Source, Section 112 of the Clean Air Act

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

- (a) Receiving and Bin Loading Operation, identified as ID1 and ID2, with a maximum capacity of 50 tons per hour of feed ingredients per hour, and exhausting fugitively to the atmosphere.
- (b) Hammermill Operation, identified as ID3, with a maximum capacity of 35 tons per hour of grain per hour, using a cyclone as control, and exhausting to stack 3.
- (c) One (1) micro room, identified as ID3, with a maximum capacity of 0.5 tons per hour of micro ingredients, using a cyclone and baghouse as control, and exhausting to stack 3.
- (d) Grain Cleaning operation, identified as ID5, with a maximum capacity of 25 tons per hour of grain, using a filter as particulate control, and exhausting to stack 5.
- (e) Pellet Cooler Operation, identified as ID6, with a maximum capacity of 25 tons per hour of pelleted feed per hour, using a cyclone as control, and exhausting to stack 6.
- (f) Bulk Loadout Operation, identified as ID7, with a maximum capacity of 60 tons per hour of finished feed per hour, and exhausting fugitively to the atmosphere.
- (g) Two (2) feed packers, with a total maximum capacity of 30 tons per hour of finished feed per hour, using a baghouse as control, which discharges internally.

- (h) One (1) natural gas fired boiler, with a maximum rated heat input of 6.3 million British thermal units per hour (MMBtu/hr), identified as B1, and exhausting to stack B1.

Purina Mills, LLC.
Milford, Indiana
Permit Reviewer: PR/EVP

1st Minor Permit Revision No. 085-15278
Modified By: Madhurima D. Moulik

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SECTION D.1

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

- (a) Receiving and Bin Loading Operation, identified as ID1 and ID2, with a maximum capacity of 50 tons per hour of feed ingredients per hour, and exhausting fugitively to the atmosphere.
- (b) Hammermill Operation, identified as ID3, with a maximum capacity of 35 tons per hour of grain per hour, using a cyclone as control, and exhausting to stack 3.
- (c) One (1) micro room, identified as ID3, with a maximum capacity of 0.5 tons per hour of micro ingredients, using a cyclone and baghouse as control, and exhausting to stack 3.
- (d) Grain Cleaning operation, identified as ID5, with a maximum capacity of 25 tons per hour of grain, using a filter as particulate control, and exhausting to stack 5.
- (e) Pellet Cooler Operation, identified as ID6, with a maximum capacity of 25 tons per hour of pelleted feed per hour, using a cyclone as control, and exhausting to stack 6.
- (f) Bulk Loadout Operation, identified as ID7, with a maximum capacity of 60 tons per hour of finished feed per hour, and exhausting fugitively to the atmosphere.
- (g) Two (2) feed packers, with a total maximum capacity of 30 tons per hour of finished feed per hour, using a baghouse as control, which discharges internally.
- (h) One (1) natural gas fired boiler, with a maximum rated heat input of 6.3 million British thermal units per hour (MMBtu/hr), identified as B1, and exhausting to stack B1.

D.1.1 Particulate Matter (PM) [326 IAC 6-3]

326 IAC 6-3-2 (Process Operations)

- (a) The particulate matter (PM) from the Receiving and Bin Loading Operation, Bulk Loadout Operation, and the Hammermill Operation shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The allowable emissions for each facility are as follows:

Emission Unit	Process Weight Rate (tons/hr)	PM Emissions (lb/hr)	Allowable PM Emissions (326 IAC 6-3-2) (lb/hr)
Receiving and Bin Loading Operation	50.00	13.36	44.58
Bulk Loadout Operation	60.00	0.87	46.29
Hammermill Operation	35.00	10.27	41.32

The cyclone shall be in operation at all times the hammermill is in operation, in order to comply with this limit.

- (b) Pursuant to 326 IAC 6-3, the particulate matter (PM) from the Pellet Cooler Operation shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

$$E = 4.10 P^{0.67} \quad \text{where } E = 35.43 \text{ pounds per hour} \\ P = 25 \text{ tons per hour}$$

The cyclone shall be in operation at all times the Pellet Cooler Operation is in operation, in order to comply with this limit.

- (c) Pursuant to 326 IAC 6-3, the particulate matter (PM) from the Micro Room, Grain Cleaning operation and the Packing Operation shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The allowable emissions for each facility are as follows:

Emission Unit	Process Weight Rate (tons/hr)	PM Emissions (lb/hr)	Allowable PM Emissions (326 IAC 6-3-2) (lb/hr)
Micro Room	0.50	0.01	2.58
Grain Cleaning Operation	25.00	8.21	35.43
Packing Operation	30.00	0.43	40.04

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- (d) Pursuant to 326 IAC 2-2, the particulate matter emissions shall be limited as follows:

Process	Pounds Per Ton
Receiving and Bin Loading	0.210
Bulk Loadout	0.180
Hammermill	0.270
Pellet Cooler	0.330
Micro Room	1.200
Grain Cleaning	0.330
Packing	0.310

This will limit the PM emissions to less than 249.8 tons per year. Therefore, 326 IAC 2-2 will not apply.

- (e) Pursuant to 326 IAC 2-1.1-5(a), the particulate matter less than 10 microns (PM-10) shall be limited as follows:

Process	Pounds Per Ton
Receiving and Bin Loading	0.030
Bulk Loadout	0.030
Hammermill	0.150
Pellet Cooler	0.175
Micro Room	0.300
Grain Cleaning	0.090
Packing	0.300

This will limit the PM10 emissions to less than 100 tons per year.

D.1.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for this emissions unit and its control device.

Compliance Determination Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.3 Particulate Matter (PM)

The cyclone for PM control shall be in operation at all times when the Hammermill Operation, identified as ID3, and the Pellet Cooler Operation are in operation.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Minor Permit Revision

Source Background and Description

Source Name: Purina Mills, Inc.
Source Location: 346 West 1350 N, Milford, IN 46542
County: Kosciusko
SIC Code: 2048
Minor Permit Revision: 085-15278
Operating Permit No: MSOP 085-14327-00021
Permit Reviewer: Madhurima D. Moulik

The Office of Air Quality (OAQ) has reviewed an application from Purina Mills, LLC. relating to the operation of an animal feed manufacturing operation.

Explanation of Modification

The source has installed two (2) new feed packers to replace the existing feed packer. The maximum packing rate has increased from 12 tons per hour to 30 tons per hour. The facility descriptions and certain applicable conditions will be modified to reflect the change.

Justification for the Revision

The MSOP is being modified through a Minor Permit Revision. Rule 326 IAC 2-6.1-6(g)(5)(C) states in part that Minor Permit Revision can be used for “modifications for which the potential to emit is limited to less than twenty-five (25) tons per year of any regulated pollutant other than hazardous air pollutants, ten (10) tons per year of any single hazardous air pollutant as defined under Section 112(b) of the CAA, or twenty-five (25) tons per year of any combination of hazardous air pollutants by complying with one (1) of the following constraints: Using a particulate air pollution control device”. The modification involved fits this category, therefore a Minor Permit Revision is used.

Enforcement Issue

- (a) IDEM is aware that equipment has been constructed prior to receipt of the proper permit.
- (b) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on January 30, 2002.

Emissions Calculations

The emissions calculations for the new feeders is included in Appendix A.

Revisions to the Permit

The following changes are the Minor Permit Revisions for this source (~~strikeout~~ added to show the deletions and **bold** to show the additions):

1) The Section A.2 is modified as follows:

- (f) Bulk Loadout Operation, identified as ID7, with a maximum capacity of 60 tons per hour of finished feed per hour, and exhausting fugitively to the atmosphere.
- (g) ~~Packing Operation, identified as ID8,~~ **Two (2) feed packers,** with a **total** maximum capacity of ~~42~~ **30** tons per hour of finished feed per hour, using a baghouse as control, **which discharges internally.** ~~and exhausting to stack 8.~~

2) The Section D.1 is modified as follows:

- (f) Bulk Loadout Operation, identified as ID7, with a maximum capacity of 60 tons per hour of finished feed per hour, and exhausting fugitively to the atmosphere.
- (g) ~~Packing Operation, identified as ID8,~~ **Two (2) feed packers,** with a **total** maximum capacity of ~~42~~ **30** tons per hour of finished feed per hour, using a baghouse as control, **which discharges internally.** ~~and exhausting to stack 8.~~

3) The Section D.1.1 (Item C) is modified as follows:

- (c) ~~Pursuant to CP 085-2792-00021, issued on June 15, 1993,~~ **Pursuant to 326 IAC 6-3,** the particulate matter (PM) from the Micro Room, Grain Cleaning operation and the Packing Operation shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The allowable emissions for each facility are as follows:

Emission Unit	Process Weight Rate (tons/hr)	PM Emissions (lb/hr)	Allowable PM Emissions (326 IAC 6-3-2) (lb/hr)
Micro Room	0.50	0.01	2.58
Grain Cleaning Operation	25.00	8.21	35.43
Packing Operation	42.00 30.00	6.17 0.43	21.67 40.04

4) The Table in D.1.1 (Item D) is modified as follows:

- (d) Pursuant to 326 IAC 2-2, the particulate matter emissions shall be limited as follows:

Process	Pounds Per Ton
Receiving and Bin Loading	0.21 0.220
Bulk Loadout	0.18 0.190
Hammermill	0.27 0.300
Pellet Cooler	0.33 0.350
Micro Room	1.20 1.250
Grain Cleaning	0.33 0.350
Packing	0.31 0.450

5) The Conditions in D.1.1 (Item # b and # c) are changed as follows:

- (b) Pursuant to **326 IAC 6-3** ~~CP 085-2792-00021, issued on June 15, 1993~~, the particulate matter (PM) from the Pellet Cooler Operation shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

$$E = 4.10 P^{0.67} \quad \text{where } E = 35.43 \text{ pounds per hour} \\ P = 25 \text{ tons per hour}$$

The cyclone shall be in operation at all times the Pellet Cooler Operation is in operation, in order to comply with this limit.

- (c) Pursuant to **326 IAC 6-3** ~~CP 085-2792-00021, issued on June 15, 1993~~, the particulate matter (PM) from the Micro Room, Grain Cleaning operation and the Packing Operation shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

Conclusion

The construction and operation of the two (2) new feed packers shall be subject to the conditions of the attached proposed MSOP Minor Permit Revision No. 085-15278-00021.

Appendix A: Process Particulate Emissions

Company Name: Purina Mills, Inc.
Address City IN Zip: 346 West 1350 N, Milford, IN 46542
CP: 085-15278-00021
Reviewer: Madhurima D. Moulik
Date: 15-Feb-2002

Process	Process Rate tons/hour	PM Emission Factor	PM-10 Emission Factor	PM Emissions Pounds Per Year	PM-10 Emissions Pounds Per Year	PM Emissions Tons Per Year	PM-10 Emissions Tons Per Year	SCC
Receiving	50	1.70E-02	2.50E-03	7,446.00	1,095.00	3.72	0.55	3-02-008-02
Bin Loading	50	1.70E-02	2.50E-03	7,446.00	1,095.00	3.72	0.55	3-02-008-02
Hammernill	35	6.70E-02	3.35E-02	20,542.20	10,271.10	10.27	5.14	3-02-008-17
Micro Room/Bag Dump	0.5	3.30E-03	8.00E-04	14.45	3.50	0.01	0.00	3-02-008-03
Grain Cleaner	25	7.50E-02	1.88E-02	16,425.00	4,106.25	8.21	2.05	3-02-005-37
Pelleting	25	1.50E-01	7.50E-02	32,850.00	16,425.00	16.43	8.21	3-02-008-16
Bulk Shipping (Loadout)	60	3.30E-03	8.00E-04	1,734.48	420.48	0.87	0.21	3-02-008-03
Bagging (packing)	30	3.30E-03	8.00E-04	867.24	210.24	0.43	0.11	3-02-008-03
Total						43.66	16.81	